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ART UNIT	PAPER NUMBER
3628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/782,681	LEE ET AL.
	Examiner	Art Unit	
	Siegfried E. Chencinski	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *11 July 2005*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-42* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *15-29, 31, 32, 35, 36 and 38-41* is/are allowed.

6) ☒ Claim(s) *1-3, 8-11, 13 and 14* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.   **Claims 1-3, 8-11, 13 and 14 are rejected** under 35 U.S.C. 103(a) as being

unpatentable over Pettitt (US Patent 6,029,154).

Re. Claim 1, Pettitt discloses a computer implemented method of processing an

online transaction, the method comprising the steps of:

- generating from an online transaction of a purchaser, a plurality of data of the

  transaction that individually do not reliably identify the purchaser (Col. 3, II. 1-3,

  collecting new key field data in order to match against prior key field data base

  data, I. 7 – internet address, I. 17-20 - dollar amount, II. 37-44 – physical address,

  physical location, internet address);

- for each data element, retrieving a profile of historical transactions associated

  with this data element (Col. 3, I. 3 – history database);

- weighting each profile with a weight indicating a degree to which the profile is

  associated with the current purchaser (Col. 3, II. 17-18 – weighting parameters,

  II. 55-59 – weighting the variety of parameters); and

- generating a quantifiable indication of whether the credit card transaction is

  fraudulent as a function of the weighted profiles and the current transaction

  (Col. 1, II. 48-56; Col. 3, II. 54-59, the "quantifiable indication on whether the

  credit and transaction is fraudulent" is a more general expression for a fraud

  score).

Pettitt does not explicitly disclose:

- generating from an online transaction of a purchaser, a plurality of keys from key

  fields of the transaction that individually do not reliably identify the purchaser

(Col. 3, II. 1-3, collecting new key field data in order to match against prior key field data base data, I. 7 – internet address, I. 17-20 - dollar amount, II. 37-44 – physical address, physical location, internet address);

- for each key, retrieving a profile of historical transactions associated with the key (Col. 3, I. 3 – history database);

- weighting each profile with a weight indicating a degree to which the profile is associated with current purchaser (Col. 3, II. 17-18 – weighting parameters, II. 55-59 – weighting the variety of parameters); and

- generating a fraud score indicative of the likelihood of fraud in the online transaction as a function of the weighted profiles and the current transaction (Col. 3, II. 54-59, the fraud score is the "quantifiable indication on whether the credit and transaction is fraudulent").

However,

- Per Applicant's specification, "key field" data is well known personal data obtained from an online credit card user from the electronic data stream and from data requested of the online customer during the transaction. It includes the customer's name, address, credit card number, e-mail address, and so forth ([0038] & [0039]). Applicant defines a "key" as one "used to identify and distinguish transactions of one buyer from transactions of another. A key is said to be reliable if it identifies a unique buyer with a very low likelihood of multiple buyers being associated with the same key or multiple keys associated with the same buyer. The Social Security number, for instance, is considered a very reliable key" ([0038]. Applicant goes on to state in this section that a person's name, credit card number, postal address, email addresses, IP numbers and phone numbers are examples of unreliable keys. In a generic sense, such information can be called data, data points, personal information and parameters. Pettitt applies the expression "parameters" to such information (Col. 2, II. 25-29, 47-54).

- It would have been obvious to an ordinary practitioner that "a quantifiable indication of whether the credit card transaction is fraudulent" is alluding to a numerical fraud scoring index similar to that of the well known FICO score the Fair Isaac credit rating score), which produces a three digit score for a consumer whose credit worthiness has been scored by the Fair Isaac credit scoring system.

- As could have been expected by an ordinary practitioner of the art, both Pettitt and Applicant use well known consumer credit purchase data as the basic data collected during an online transaction. (Applicant - [0043], II. 4-9; Pettitt – Col. 2, II. 23-29;

- Both Pettitt and Applicant accumulate such data for each credit card user from multiple merchants a given credit card user has contacted on line over time to build up a credit card usage pattern for each such consumer. (Pettitt – Col. 2, I. 42 - Col. 3, I. 3; Applicant – [0038]-I. 9 – 16). Pettitt is less detailed in outlining what personal information the merchant collects because he assumes that the ordinary practitioner is knowledgeable about the basic information to be obtained from a credit card customer. However, it is obvious from the pieces of information disclosed by Pettitt, since he mentions various pieces thereof (Col. 3, II. 37-42; Col. 4, II. 17-21). The data listed by Applicant to be obtained by the merchant is all obvious and well known data which an ordinary practitioner would ask from the customer, since this data is routinely requested from credit card users as part of their security routines, and data which automatically comes across the internet to the merchant during the online session (click-stream data). It is obvious in Pettitt that the customer's name is collected.

Therefore, it would have been obvious to an ordinary practitioner of the art at the time of Applicant's invention to have combined the teaching of Pettitt with information well known to the ordinary practitioner in order to offer a computer implemented online method and system for processing online transactions in a manner which would minimize the likelihood of credit card fraud, motivated by the fundamental interests of

the user buyer and the merchant seller to consummate an online transaction which has been deemed safe by the seller's verification system (Pettitt, Col. 1, II. 57-67).

Re. Claim 2, Pettitt discloses method wherein the key fields of the online transaction includes fields associated with any of purchaser identification information, order information, and payment information (Col. 3, II. 19-20 – dollar amount of the transaction).

Re. Claim 3, Pettitt discloses a method wherein each profile for a key includes a plurality of summary variables derived from the associated historical transactions, and which summarize the historical transactions having the key in a key field of the historical transactions (Col. 3, II. 1-11 – history database, including data added by other merchants, II. 41-46 – the number and map of historical transactions).

Re. Claim 8, Pettitt discloses a method further comprising the step of:
using the fraud score to determine whether to approve the transaction or decline the transaction (Col. 2, II. 54-56; Col. 3, II. 56-60).

Re. Claim 9, Pettitt discloses a method responsive to determining to approve the transaction (Validating a transaction means approving a transaction – Col. 1, II. 56-59). Pettitt does not explicitly disclose completing the transaction order and fulfilling payment instructions for the order. However, it is obvious to expect from an automated transaction process that an approved transaction will be followed by the steps of completing the transaction order and fulfilling payment instructions for the order. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the well known method in an automated transaction process of having an approved transaction be followed by the steps of completing the transaction order and fulfilling payment instructions for the order. Such a combination would have been motivated by the fundamental interests of the user buyer and the merchant seller to consummate an online transaction which has been deemed safe by the seller's verification system (Pettitt, Col. 1, II. 57-67).

Re. Claim 10, Pettitt discloses a method responsive to determining to decline a transaction (Col. 1, II. 48-58; Col. 2, II. 17-21, 35-38. Determining that a transaction has a likelihood above the fraud detector threshold means declining a transaction).

Pettitt does not explicitly disclose transmitting a signal indicating that the transaction is declined. However, it is obvious to expect from an automated transaction process that a declined online transaction will be followed by the steps of transmitting a signal indicating that the transaction is declined. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the well known method in an automated transaction process of having declined online transaction will be followed by the steps of transmitting a signal indicating that the transaction is declined. Such a combination would have been motivated by the fundamental interests of the merchant seller to decline an online transaction which has been deemed potentially fraudulent by the seller's verification system (Pettitt, Col. 1, ll. 57-67; Col. 2, ll. 23-29, 52-56).

Re. Claim 11, Pettitt discloses a method wherein using the fraud score to determine whether to approve the transaction or decline the transaction further comprises the step of: applying a plurality of rules to the fraud score and to the transaction (Col. 1, ll. 49-53; Col. 2, ll. 23-29, 35-38, 47-56; Col. 2, l. 57 – Col. 3, l. 60).

Re. Claim 13, Pettitt discloses a method using the fraud score to determine whether to approve the transaction or decline the transaction further comprises:
declining the transaction if the fraud score is below a cutoff score. Pettitt does not explicitly disclose a method wherein the cutoff score is a function of a net margin of a merchant receiving the transaction. However, it has been a long standing and well known credit management practice to manage credit risk on the basis of various profit considerations, including the net margin of a sale. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the well known method of using net profit as a determinant of a risk cutoff score in a computer automated transaction process. Such a combination would have been motivated by the fundamental interests of the merchant seller to maintain credit risk losses below an acceptable level through the merchant seller's efficient computer automated verification method (Pettitt, Col. 1, ll. 57-67; Col. 2, ll. 23-29, 52-56).

Re. Claim 14, Pettitt discloses a method wherein using the fraud score to determine whether to approve the transaction or decline the transaction. Pettitt does not explicitly disclose a method which further comprises:

- for each of a plurality of different product categories, defining a different cutoff score; and
- responsive to the product category pertaining to the transaction, applying the cutoff score for the product category to the fraud score.

However, as stated in the rejection of claim 13 above, the well known credit management technique of managing credit according to profit margin will obviously create different cutoffs for different products since different products will have different net margins and other differing characteristics, such a product close-out or some other differing characteristic which would cause a merchant to assign a different parameter as the determinant of a risk cutoff. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the well known variables of risk cutoff score for different products in a computer automated transaction process. Such a combination would have been motivated by the fundamental interests of the merchant seller to maintain credit risk losses below an acceptable on the basis of different product considerations through the merchant seller's efficient computer automated verification method (Pettitt, Col. 1, II. 57-67; Col. 2, II. 23-29, 52-56).

2.   **Claim 4-7 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Pettitt as applied to claims 1, 15 and 19 above, and further in view of French et al. (US Patent 6,282,658 B2, hereafter French).

Re. Claim 4, Pettitt discloses using a fraud score to determine whether to complete a transaction. Pettitt does not explicitly disclose a method further comprising:

using the fraud score to determine whether to obtain additional information prior to completing the transaction (Col. 3, II. 54-59). However, French discloses a method of using a fraud score to determine whether to obtain additional information prior to completing the transaction (Using a validation check prior to a transaction, equivalent

to a fraud score – Col. 7, ll. 46-67; obtaining Col. Col. 9, ll. 29-32; Col. 10, ll. 5-6, 66-67). It would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the art of French for the purpose of determining whether to obtain additional information prior to completing the transaction, motivated by the desire to permit users who are entitled to be authenticated to permit a transaction the opportunity to be authenticated when the authentication system is unable to generate a passing fraud score (French, Col. 1, ll. 57-67).

Re. Claim 5, Pettitt does not explicitly disclose a method further comprising the steps of:

responsive to determining to obtain additional information, presenting a form with questions selected to obtain the additional information from the purchaser. However, the method of presenting users a form for providing additional information on line has been well known prior to the date of Applicant's invention, such as a previous address, a previous telephone number, one's mother's maiden name, the name plate of one's first automobile, etc. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the well known method of presenting a user with an online form for the purpose of providing additional information prior to completing the transaction, motivated by the desire to permit users who are entitled to be authenticated to permit a transaction the opportunity to be authenticated when the authentication system is unable to generate a passing fraud score (French, Col. 1, ll. 57-67).

Re. Claim 6, Pettitt does not explicitly disclose a method further comprising the step of:

using the fraud score to determine whether to hold the transaction for further review by a human analyst. However, French discloses using the fraud score to determine whether to hold the transaction for further review by a human intervention, meaning a human analyst (Col. 18, ll. 55-60). It would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the art of French for the purpose of determining whether to obtain

additional information prior to completing the transaction, motivated by the merchant's desire risk the possibility of a fraudulent transaction when the authentication system is unable to generate a passing fraud score (French, Col. 2, ll. 1-5).

Re. Claim 7, Pettitt does not explicitly disclose a method further comprising the step of:

responsive to determining to hold the transaction for further review, outsorting the transaction to a file for review by human analyst to determine whether to decline or approve the transaction, or obtain additional information prior to completing the transaction. However, French discloses accomplishing the comparisons through human intervention (Col. 18, ll. 55-60). As part of a computer automated method, it is obvious that the method would involve outsorting the transaction to a file for review by a human analyst to determine whether to decline or approve the transaction, or obtain additional information prior to completing the transaction. It would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the art of French for the purpose of using human intervention to determine the probability of a fraudulent transaction prior to completing the transaction. The motivation to do this would have been the desire to make a sale under conditions where the risk of fraud is within acceptable limits when the computer automated authentication system is unable to generate a passing fraud score (French, Col. 2, ll. 1-5).

3.   **Claims 30 and 37 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Pettitt in view of French.

Re. Claim 30, Pettitt discloses a system for processing online transactions, the system comprising:

- a rule engine that receives from a scoring system a fraud score associated with a transaction, the fraud score indicating the likelihood of fraud in the transaction, which applies a plurality of stored rules to the fraud score, each rule providing a condition and an action to perform in response to the

transaction or the fraud score, to determine according to the rules whether to approve or decline the transaction (Col. 1, ll. 48-59; Col. 2, 5-7, 17-56).

Petitt does not explicitly disclose

- a request for more information from the purchaser, or to hold the transaction for review by a human analyst;

- an outsort management workstation that receives from the rule engine transactions to be held for review, stores the transactions in queues, and provides access to the queues to a human analyst in order to review transactions in the queues, the outsort management workstation further adapted to define for each queue at least one criteria for associating a transaction with the queue; and

- a policy management workstation adapted to access the stored rules, and define rules for the rule engine to apply.

However, French discloses

- a request for more information from the purchaser(Col. 3, ll. 34-36), or holding the transaction for further review by a human analyst (Col. 18, ll. 55-60);

- an outsort management workstation that receives from the rule engine transactions to be held for review, stores the transactions in queues, and provides access to the queues to a human analyst in order to review transactions in the queues, the outsort management workstation further adapted to define for each queue at least one criteria for associating a transaction with the queue (Col. 18, ll. 58-62; Col. 19, l. 32 – Col. 20, 67. These systems steps are obviously necessary to carry out these functions in a computer automated system); and

- a policy management workstation adapted to access the stored rules, and define rules for the rule engine to apply (Col. 18, ll. 58-62; Col. 19, l. 32 – Col. 20, 67. These systems steps are obviously necessary to carry out these functions in a computer automated system).

It would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt and well known and necessary steps with the art of French for the purpose of taking extra precautions under uncertain fraud indicator conditions to determine the probability of a fraudulent transaction prior to completing the transaction. The motivation to do this would have been the desire to make a sale under conditions where the risk of fraud is within acceptable limits when the computer automated authentication system is unable to generate a passing fraud score (French, Col. 2, ll. 1-5).

Re. Claim 42, Pettitt suggests a method wherein said fraud score comprises a scaled score. Pettitt suggests a scaled value fraud score because the ubiquitous FICO score would have come to mind for the ordinary practitioner of the art in seeing the Pettitt disclosure. Further, had Pettitt intended to teach a binary, or yes/no, reply to the merchant, he surely would have said so instead of using the expression "quantitative indication".

Re. Claim 37, Pettitt discloses a system for processing online transactions, the system comprising:

- a rule engine having a function of determining whether to approve a transaction or decline the transaction, wherein each rule defines a condition and an action to perform in response to the transaction or the fraud score, to produce a determination for handling the transaction (Col. 1, ll. 48-59; Col. 2, 5-7, 17-56);

Pettitt does not explicitly disclose

- requesting more information from the purchaser of the transaction, or holding the transaction for review by a human analyst by way of receiving a fraud score for the transaction from a scoring system and applying rules to the fraud score, wherein each rule defines a condition and an action to perform in response to the fraud score, to produce a determination for handling the transaction.

- an outsort management workstation having a function of queuing transactions to be held for review and providing access to the queues to a human analyst in order to review transactions in the queues by way of receiving from the rule engine transactions to be held for review and storing the transactions in

      queues, each queue having at least one criteria for storing a transaction in the queue, to produce a set of queues, each queue storing one or more transactions; and

- a policy management workstation having a function of defining rules for the rule engine to apply, by way of providing access to the stored rules.

However, French discloses

- requesting more information from the purchaser of the transaction (Col. 3, ll. 34-36), or holding the transaction for review by a human analyst (Col. 18, ll. 55-60) by way of receiving a fraud score for the transaction from a scoring system and applying rules to the fraud score, wherein each rule defines a condition and an action to perform in response to the transaction or the fraud score, to produce a determination for handling the transaction (Col. 18, ll. 58-62; Col. 19, l. 32 – Col. 20, 67. These systems steps are obviously necessary to carry out these functions in a computer automated system).

- an outsort management workstation having a function of queuing transactions to be held for review and providing access to the queues to a human analyst in order to review transactions in the queues by way of receiving from the rule engine transactions to be held for review and storing the transactions in queues, each queue having at least one criteria for storing a transaction in the queue, to produce a set of queues, each queue storing one or more transactions (Col. 18, ll. 58-62; Col. 19, l. 32 – Col. 20, 67. These systems steps are obviously necessary to carry out these functions in a computer automated system); and

- a policy management workstation having a function of defining rules for the rule engine to apply, by way of providing access to the stored rules (Col. 18, ll. 58-62; Col. 19, l. 32 – Col. 20, 67. These systems steps are obviously necessary to carry out these functions in a computer automated system).

It would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt and well known and necessary steps with the art of French for the purpose of taking extra precautions under

uncertain fraud indicator conditions to determine the probability of a fraudulent transaction prior to completing the transaction. The motivation to do this would have been the desire to make a sale under conditions where the risk of fraud is within acceptable limits when the computer automated authentication system is unable to generate a passing fraud score (French, Col. 2, II. 1-5).

4.   **Claim 12 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Pettitt as applied to claim 8, and further in view of Putta et al. (US PreGrant Publication 2001/0032192 A1, hereafter Putta).

Re. Claim 12, Pettitt discloses a method wherein using the fraud score to determine whether to approve the transaction or decline the transaction further comprises a history check which includes the active matching of previous database information within the history database which can be added to by other merchants. The analysis of velocity data suggests a review of the number of transactions over time, especially most recently. Further, Putta discloses applying the use of velocity analysis in managing credit card instruments in the context of maintaining security (Page 2, [0019}, II. 5-8). Further, the concept of velocity has been a well established analytical tool in various aspects of finance at the time of Applicant's invention. Hence, it would have been obvious to an ordinary practitioner of the art at the time of Applicant's invention to have made use of improved financial instrument processing, including making use of velocity data measuring a frequency of the attribute in a plurality of transactions; and applying a velocity rule to the velocity data. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the well established concept of financial velocity analysis and with the art of Putta for the purpose making use of velocity data measuring a frequency of the attribute in a plurality of transactions and applying a velocity rule to the velocity data to determine the probability of a fraudulent transaction prior to completing the transaction. The incorporation of the Putta teaching would have been motivated by the desire to use more flexible methods of processing transactions

and payments based on existing credit card processing infrastructure while requiring minimal changes thereto. (Putta, Page 2, [0021], ll. 1-4).

7.   Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettitt in view of Gopinathan.

Re. Claim 33, Pettitt discloses a method for establishing a cutoff score for a transaction processing system that processes transactions of a merchant, comprising the steps of:

- providing a statistical model that generates a score categorizing a transaction, the score used by the merchant to accept or reject the transaction (Col. 2, ll. 42-56).

Pettitt does not explicitly disclose

- determining for each of a plurality of scores generated by the statistical model an actual transaction false positive rate;
- determining a desired transaction false positive rate as a function of the merchant's net margin; and
- setting the cutoff score for rejecting transactions as a score having an actual transaction false positive rate approximating or equal to the desired transaction false positive rate.

However, Gopinathan discloses

- determining for each of a plurality of scores generated by the statistical model an actual transaction false positive rate (Col. 1. ll. 58-59).

Gopinathan does not explicitly disclose

- determining a desired transaction false positive rate as a function of the merchant's net margin (Col. 1, ll. 58-59); and
- setting the cutoff score for rejecting transactions as a score having an actual transaction false positive rate approximating or equal to the desired transaction false positive rate.

However, margins of various definitions have been a well known credit management practice to manage credit risk on the basis of various profit considerations, including the net margin of a sale. Further, the goal of modeling is to find modeled results which are substantially similar to or identical to the desired actual phenomenon, in this case the desired transaction false positive rate. Also, it is well known that lenders use a variety cutoff scores in making use of a FICO score based on their own policies and views credit risk. In addition, a widely known business practice is to aoid having perfect information and zero risk in extending credit because such practices cost too much to enforce and such practices are counter productive since they would drive away more credit worthy business than it would save from fraud or other credit related causes. As a result, business tend to make provision for a 1% to 2% doubtful account loss in their budgets as a cost of doing business. This reality also generally militates away from yes/no. binary credit or fraud evaluation scoring and militates towards scalar, more flexible, less black and white evaluations towards measures which hlie within degrees of likelihood. A business's net margin is one factor used to credit and related risk policies. The higher the net margin, the greater risk a business is willing to accept, although other factors will also be considered, such as value of each transaction. For example, high value transaction with a low number of unit sales will be scrutinized more closely than low value transactions with high unit sales. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the art of Gopinathan and well known credit management and statistical modeling practices to establish a cutoff score for rejecting a computer automated online transaction. Such a combination would have been motivated by the merchant's fundamental interest in screening transactions and isolating those which are likely to be fraudulent (Gopinathan, Col. 2, ll. 15-20).

Re. Claim 34, Pettitt does not explicitly disclose a method wherein determining a desired transaction false positive rate as a function of the merchant's net margin comprises:

- setting the transaction false positive rate TFPR according to the equation:

- TFRP = (1-Net Margin)/Net Margin

wherein Net Margin is the merchant's net margin.

However, Gopinathan discloses determining a desired transaction false positive rate as a function of selected parameters (Col. 1, ll. 58-59);

Gopinathan does not explicitly disclose setting the transaction false positive rate TFPR according to the equation: TFRP = (1-Net Margin)/Net Margin.

However, this equation merely expresses in equation form the application of the well known credit management practice to manage credit risk on the basis of various profit considerations, including the net margin of a sale. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of applicant's invention to have combined the art of Pettitt with the art of Gopinathan and well known credit management and statistical modeling practices to establish a cutoff score for rejecting a computer automated online transaction. Such a combination would have been motivated by the fundamental interests of the merchant seller to maintain credit risk losses below an acceptable level through the merchant seller's efficient computer automated verification method (Gopinathan, Col. 2, ll. 15-20).

Response to Arguments

8.   Applicant's arguments filed July 11, 2005 with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

9.   Applicant's arguments filed July 11, 2005 with respect to claims 30, 33 and 37 have been fully considered but they are not persuasive.

ARGUMENT Re. Claim 30

... "as no fraud score is taught in Pettitt, Pettitt can not have a condition or an action to perform in response to the fraud score (p. 29, ll. 1-2)

RESPONSE

As explained in the rejection of claim 1 above, Pettitt suggests a fraud score through the phrase "to provide a merchant with a quantifiable indication of whether the credit card transaction is fraudulent" (Col. 1, ll. 54-56) because an ordinary practitioner of the art

would have seen it as obvious because he or she would have been reminded of the
quantitative FICO score which is a ubiquitous element in American credit reports.

ARGUMENT Re. Claim 37

1. The Pettitt matching system does not describe rules.

2. Pettitt describes no rules applied to a fraud score as Pettitt teaches no rules or fraud
score.

3. As no fraud score is taught in Pettitt, Pettitt can not have a condition or an action to
perform in response to the fraud score.

RESPONSE

1. The Pettitt matching system suggests rules to the ordinary practitioner. The first
rule suggests to a merchant they approve the transaction if a favorable quantitative
indication is provided, and that a transaction not be approved if an un favorable
quantitative indication is provided through the language "whether the credit card
transaction is fraudulent" (Col. 1, ll. 54-56). The suggestion is obvious – approve if it is
not fraudulent, decline or suspend if it is fraudulent. Further, Pettitt teaches many rules
throughout his disclosure, beginning with the rule to submit certain kinds of data to the
evaluation provider, and then various rules during the evaluation process, ending with
the rule to provide a quantitative indication at the end of the evaluation process.

2. As described in item 1 above regarding rules in this response regarding claim 37,
Pettitt does indeed suggest rules and a fraud score.

3. Since Pettitt does indeed suggest a fraud score, the rules taught and suggested by
Pettitt, Pettitt is indeed able to have a condition or an action to perform in response to
the fraud score.

ARGUMENT Re. Claim 33

1. Pettitt teaches a fraud detector that indicates whether a particular transaction is
valid, column 2, lin 55-56. This is a yes/no or binary operation. In stark contrast, Claim
33 generates a score which his taught as a scaled value (p. 31, ll. 2-5).

2. The combination of Pettitt and Gopinathan does not teach all of he claimed
limitations of claim 33 because there is no suggestion of a plurality of scores in
Gopinathan.

3. The examiner has engaged in inappropriate hindsight in rejecting claim 33 under 35 U.S.C. 103(a).

RESPONSE

1. As explained above, Pettitt suggests a scaled value fraud score because the ubiquitous FICO score would have come to mind for the ordinary practitioner of the art in seeing the Petitt disclosure. Further, had Pettitt intended to teach a binary, or yes/no, reply to the merchant, he surely would have said so instead of using the expression "quantitative indication".

2. Since Pettitt does suggest or bring to mind a scaled score to the ordinary practitioner, the rejection of claim 33 under the 35 U.S.C. 103(a) is proper, since it makes use of well known information, the knowledge of an ordinary practitioner of the art, and what would have been obvious to the ordinary practitioner of the art at the time of Applicant's invention.

3. Reliance on well known practices and the knowledge of the ordinary practitioner are valid bases for 35 U.S.C. 103(a) rejections, as rendered in numerous court opinions, such as *In re McLaughlin*, 170 USPQ 209 (CCPA 1971) "Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at time claimed invention was made and **does not include knowledge** gleaned **only from applicant's disclosure**, reconstruction is proper". In the instant case, the examiner has taken into account only knowledge which was within the level of ordinary skill at time claimed invention was made, as documented in the above rejection of claim 33 and in the response in this section.

10.   Applicant's arguments filed July 11, 2005 with respect to claims 15, 19, 22, 28, 29, 31, 35 and 36 have been fully considered and are persuasive. The rejections of claims 15, 19, 22, 28, 29, 31, 35 and 36 have been withdrawn.

Allowable Subject Matter

11.   Claims 15-29, 31, 32, 35, 36 and 38-41 are allowed.

12.   The following is a statement of reasons for the indication of allowable subject matter:

Re. Claims 15 & 36, Pettitt is the closest prior art to Applicant's invention found by the examiner. Pettitt does disclose or suggest generating a contrast measure comparing the summary variables of at least two of the profiles and the examiner does not see it as obvious for an ordinary practitioner at the time of applicant's invention to have seen a contrast measure and a summary variable as obviously suggested by Pettitt's teaching.

Re. Claim 19, Pettitt is the closest prior art to Applicant's invention found by the examiner. Pettitt does not disclose "computing at least one contrast measure for a summary variable included in the set of profiles". This limitation is viewed by the examiner as allowable because it does not appear that the ordinary practitioner would find a contrast measure and a summary variable obvious in the context of fraud detection evaluation model disclosed by Petitt.

Re. Claims 28 & 35, Pettitt does not disclose or suggest summary profiles. The examiner does not see it as obvious for an ordinary practitioner at the time of applicant's invention to have seen summary profiles as obvious in the context of fraud detection evaluation model disclosed by Pettitt.

Re. Claim 29, Pettitt does not disclose summary profiles and summary variables. The examiner does not see it as obvious for an ordinary practitioner at the time of applicant's invention to have seen a summary profiles and a summary variable as obviously suggested by Pettitt's teaching.

Re. Claim 31, Pettitt does not disclose summary profiles and contrast variables. The examiner does not see it as obvious for an ordinary practitioner at the time of applicant's invention to have seen a summary profile, a summary variable and a contrast measure as obviously suggested by Pettitt's teaching.

Conclusion

13.   Any inquiry concerning this communication or earlier communications from the
Examiner should be directed to Siegfried Chencinski whose telephone number is 571-
272-6792. The Examiner can normally be reached Monday through Friday, 9am to 6pm.
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's
supervisor, Hyung S. Sough, can be reached on (571) 272-6799.

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Any response to this action should be mailed to:
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or faxed to:

> *(571)273-8300*   [Official communications; including After Final
> communications labeled "Box AF"]

> *(571) 273-6792*   [Informal/Draft communications, labeled
> "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to the address found on the above
USPTO web site in Alexandria, VA.

SEC
January 17, 2006